WHAT IS CLAIMED IS:

1. A method for modifying an engine control parameter for engine transients comprising:

a) processing data values that are correlated with rate of change of engine fueling and rate of change of engine speed and that are indicative of engine transients according to a look-up table that contains multiple data values of an adder, each of which correlates with a corresponding pair of rate-of-change of engine fueling and rate-of-change of engine speed data values to select, from the table, an adder data value correlated with the processed rate of change of engine fueling and the processed rate of change of engine speed data values; and

b) modifying a data value for the control parameter by adding the selected adder data value from the table to the data value for the control parameter.

2. A method as set forth in claim 1 in which step a) comprises processing a data value for rate of change of engine fueling according to a first normalizing function to develop the data value correlated with rate of change of engine fueling, and processing a data value for rate of change of engine speed according to a second normalizing function to develop the data value correlated with rate of change of engine speed.

3. A method for modifying multiple engine control parameters for engine transients comprising:

a) processing data values that are correlated with rate of change of engine fueling and rate of change of engine speed and that are indicative of engine transients according to a look-up table that contains multiple data values of an adder, each of which correlates with a corresponding pair of rate-of-change of engine fueling and rate-of-change of engine speed data values to select, from the table, an adder data value correlated with the processed rate of change of engine fueling and the processed rate of change of engine speed data values; and

b) modifying a data value for each of the multiple control parameters by adding the selected adder data value from the table to the data value for each of the multiple control parameters.

4. A method as set forth in claim 3 in which step a) comprises processing a data value for rate of change of engine fueling according to a first normalizing function to develop the data value correlated with rate of change of engine fueling, and processing a data value for rate of change of engine speed according to a second normalizing function to develop the data value correlated with rate of change of engine speed.

5. An internal combustion engine comprising:

a) multiple sub-systems under the control of an engine control system that comprises a processor;

b) wherein the processor processes various data to develop a data value for a control parameter for one of the multiple sub-systems;

c) wherein the processor processes data values that are correlated with rate of change of engine fueling and rate of change of engine speed and that are indicative of engine transients according to a look-up table that contains multiple data values of an adder, each of which correlates with a corresponding pair of rate-of-change of engine fueling and rate-of-change of engine speed data values to select, from the table, an adder data value correlated with the processed rate of change of engine fueling and the processed rate of change of engine speed data values; and

d) wherein the processor adds the selected adder data value from the table to the data value for the control parameter for one of the multiple sub-systems.

6. An internal combustion engine as set forth in Claim 5 wherein the processor processes a data value for rate of change of engine fueling according to a first normalizing function to develop the data value correlated with rate of change of engine fueling, and processes a data value for rate of change of engine speed according to a second normalizing function to develop the data value correlated with rate of change of engine speed.

7. An internal combustion engine as set forth in Claim 5 wherein the processor adds the selected adder data value from the table to the data value for the respective control parameter for each of multiple ones of the sub-systems.

8. An internal combustion engine as set forth in Claim 7 wherein the processor processes a data value for rate of change of engine fueling according to a first normalizing function to develop the data value correlated with rate of change of engine fueling, and processes a data value for rate of change of engine speed according to a second normalizing function to develop the data value correlated with rate of change of engine speed.